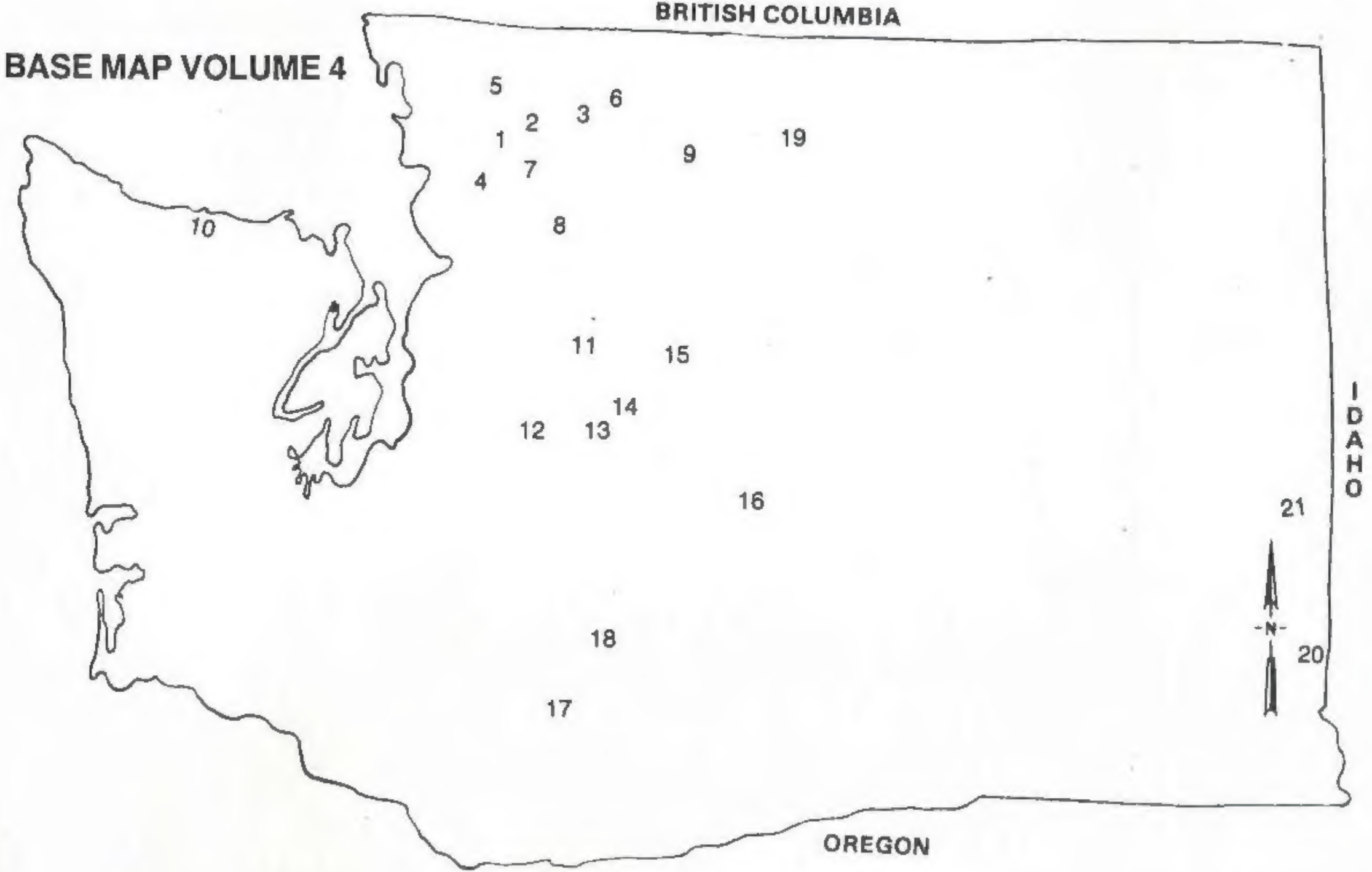
BASE MAP VOLUME 4
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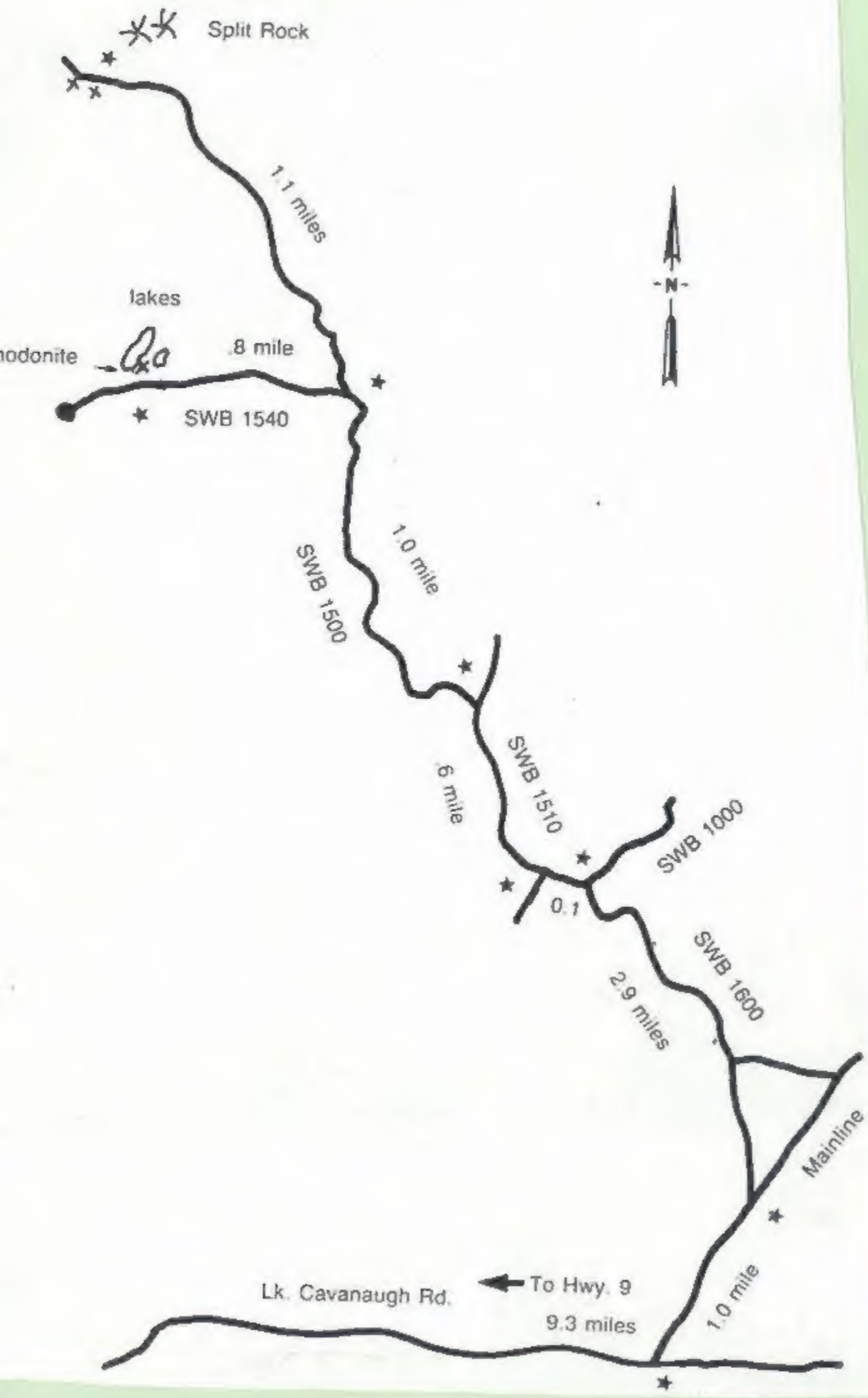
1. BIG LAKE RHODONITE
2. SPLIT ROCK



1. BIG LAKE RHODONITE

MINERALS: RHODONITE, AGATE, CALCITE, all massive

Cascade rhodonite deposits are generally small in size, but produce very attractive material. The Mount Higgins deposit covered in an earlier volume of this series is now depleted, and this new one will nicely fill the gap.

The deposit is an outcrop on a low ridge between two small lakes. You can recognize the rhodonite by the black manganese staining which covers the veins. Near surface material is cream to flesh pink in color; we peeled away about a foot of material before finding nice bright pink color. Most pieces will have the characteristic black spider-webbing of manganese. Bring a bar and a heavy hammer to work the vein at the face of the outcrop. The low ridge appears to contain several veins, but we only worked the one closest to the road.

If you go in wet weather, wear boots as the area between the lakes is swampy. The ridge just south of the road has seams of agate. This area is highly mineralized and virtually uncollected, so a bit of prospecting will likely turn up new finds.

2. SPLIT ROCK

MINERALS: PREHNITE, AGATE, as veins

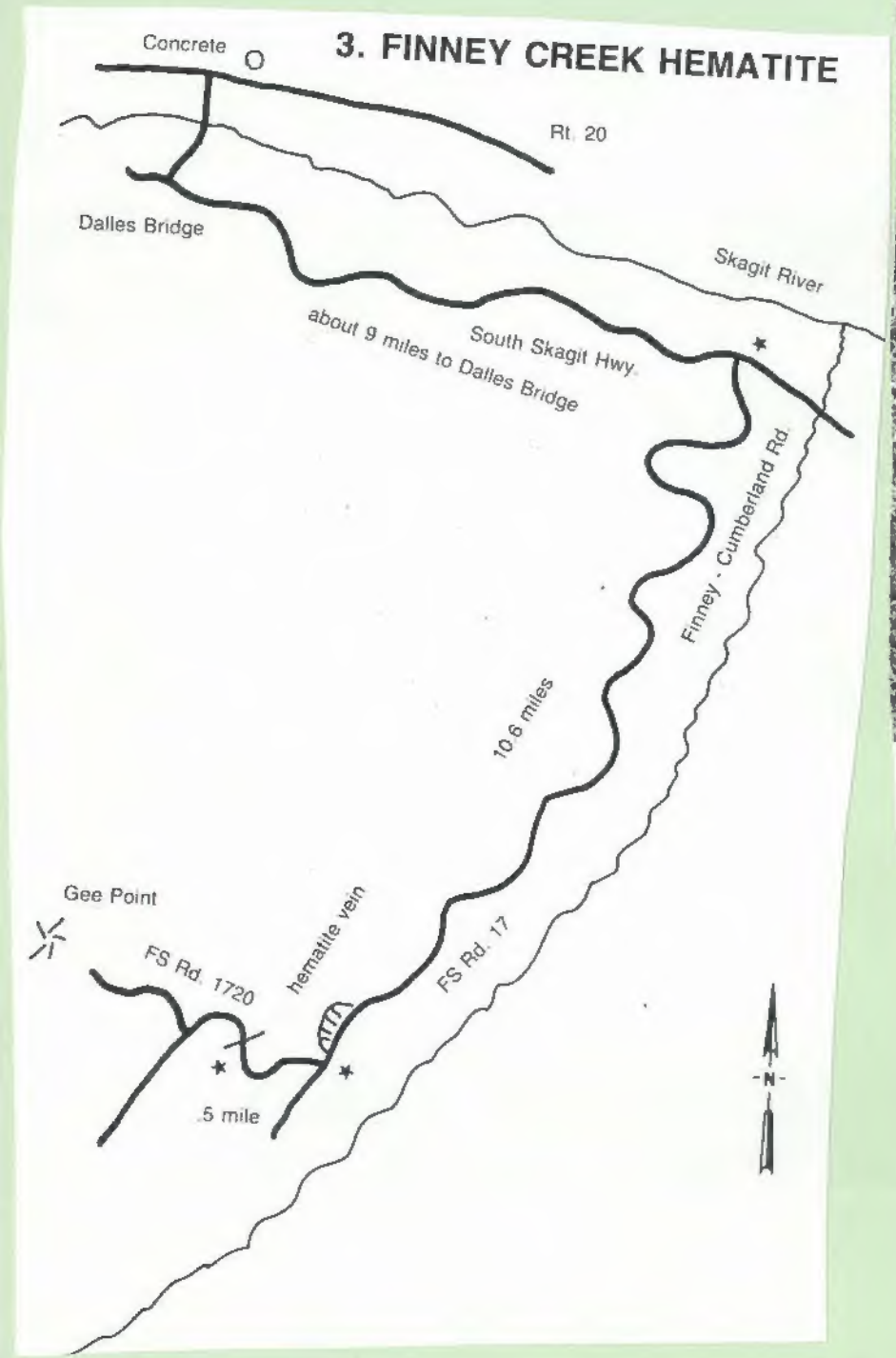
This locality is named for the prominent landmark just north of the deposit and clearly visible from the road. The map mileage may be slightly off as I had to hike the last quarter mile in the snow. The locality is the first large cut past Split Rock.

The agate is locally termed "Golden Bloom," in reference to inclusions of yellow goethite which somewhat resemble flowers. It cuts pretty cabs. Goethite inclusions in agate are the cause of the play of colors in fire agate; but I have not seen any hint of iridescence in this material. Perhaps it should be called "Fireless Agate?"

Prehnite is a calcium aluminum silicate often found with zeolites. Veins of massive prehnite are rather unusual outside of zeolite deposits, so this is a cutting material with which you may not be familiar. It is light green to lime green in color, and frequently shows some chatoyancy. The prehnite seams are concentrated on the far end of the cut. The agate seams are most abundant in the small gully which runs perpendicular to the road at the near end of the cut.

On the way in or out of these roads, you can hunt another variety of rhodonite in Bear Creek, which flows into Pilchuck Creek from the north. The source for this rhodonite has not been found, but boulders are fairly common in the creek. The rhodonite occurs in swirled patterns like wavy banded agate. Jade and agate have also been found in Bear Creek.

Prehnite seam at Split Rock roadcut.



FINNEY CREEK HEMATITE

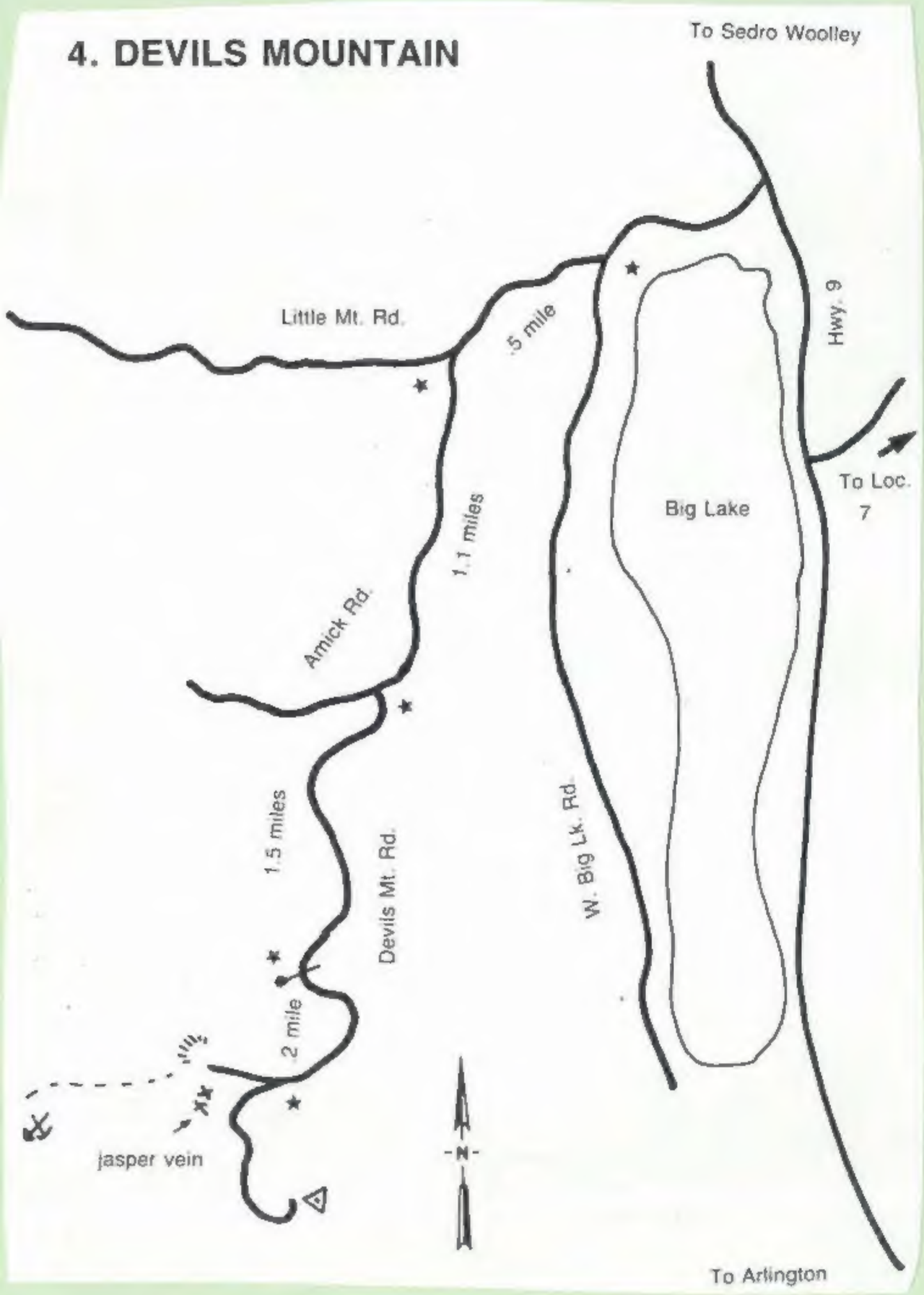
3. FINNEY CREEK HEMATITE

HEMATITE, PYRITE, massive QUARTZ crystals

This dark red-brown massive hematite, some with pyrite blebs, some with red agate spots, cuts good stones. As the patterns are rather large, it may be more suitable to bookends than cabochons. The hematite vein is best recognized by its density--this is HEAVY ROCK, MAN!

The outcrop has two major veins in it, about 6 inches wide. Once you know what to look for, you can go back to the main road and collect in the big cut just before the turnoff you took on rd. 1720. The hematite here is banded, and very closely resembles the gneiss which encloses it. Some has copper staining on the outside, but the blue and green colors are weathering products, and so don't show up inside the pieces.

We found some small quartz crystals in the rubble at the cut.



4. DEVILS MOUNTAIN

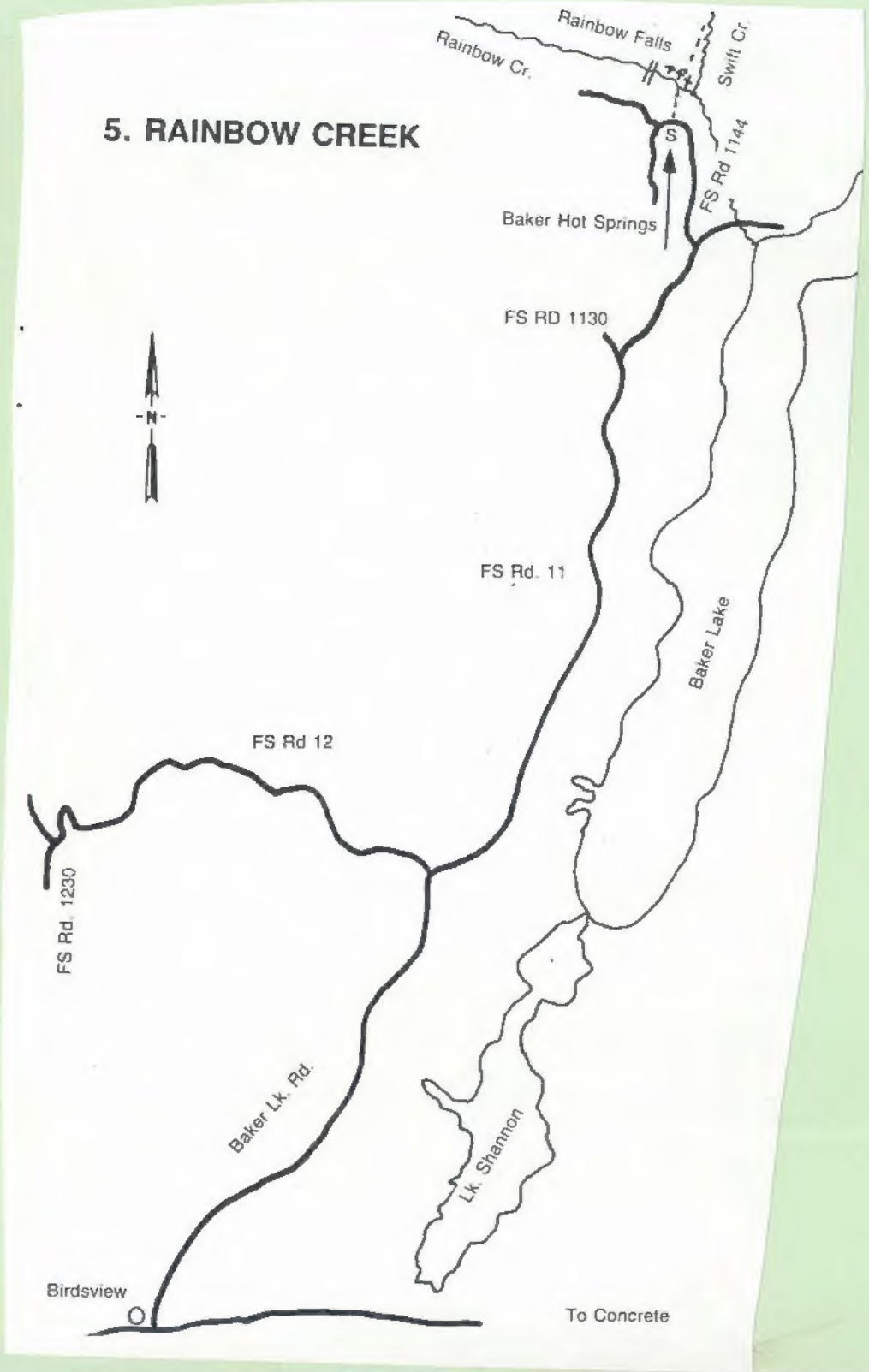
MINERALS: AGATE, JASPER, DRUSY QUARTZ

If you're looking for BIG pieces of jasp-agate, try this one out.

The deposit is a prominent knob on a hillside, and the whole knob is agatized! There are several veins which traverse the hillside, which is covered with ferns and other vegetation. Seems like every rock we turned over had agate in or on it. The massive rock in which the agate occurs is garnierite, a massive nickel mineral. The garnierite will often cut and polish also, so if you find attractive patterns of agate in it, take the whole piece.

Unless you are driving a 4 X 4, park at the intersection of the road to the borrow pit. Walk down the hill. When the road flattens out, look to your left for the outcrop about 50 feet up the hill in the woods. There is an old nickel mine on the ridge trail west of the borrow pit, and more seams of jasp-agate along the way.

At the turnoff from Amick Rd., Devils Mt. Rd. is marked "private," but is actually a state service road to the microwave tower on Devils Mountain. It's a good idea to park your vehicle within sight of the tower road, so that you won't get locked in. The gate is usually only locked during times of high fire danger.



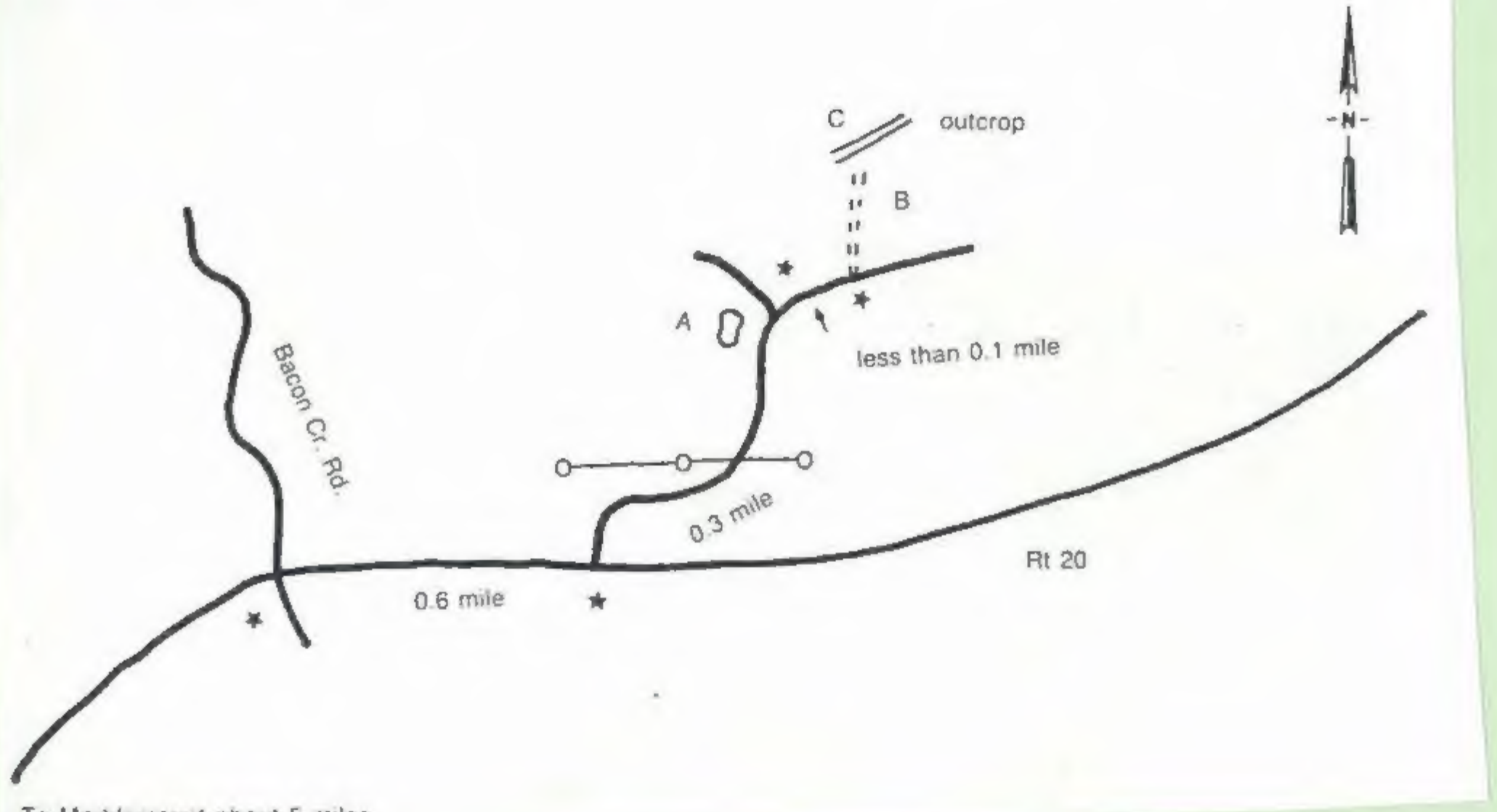
5. RAINBOW CREEK

MINERALS: AGATE, in veins and thundereggs

Rainbow Creek is a tributary to Baker Lake, a prime recreational area in Skagit county. Agate pieces and seams are abundant in the stream below Rainbow Falls, and also in Swift Creek to the north. Easiest access is by trail from Baker Hot Springs. The Forest Service trail bridge over Rainbow Creek is currently washed out, which makes crossing the creek at times of high water flow all but impossible.

Thundereggs are also found in the creeks, but their source is unknown. A roadcut locality for thundereggs is at the intersection of the Blue Lake road. The eggs are under 3 inches, but have attractive agate centers, some with scenic sagenite. The rock in the cut is quite hard, but eggs are still available in the roadfill derived from the cut and on the hillside in soil.

6.SKAGIT SOAPSTONE

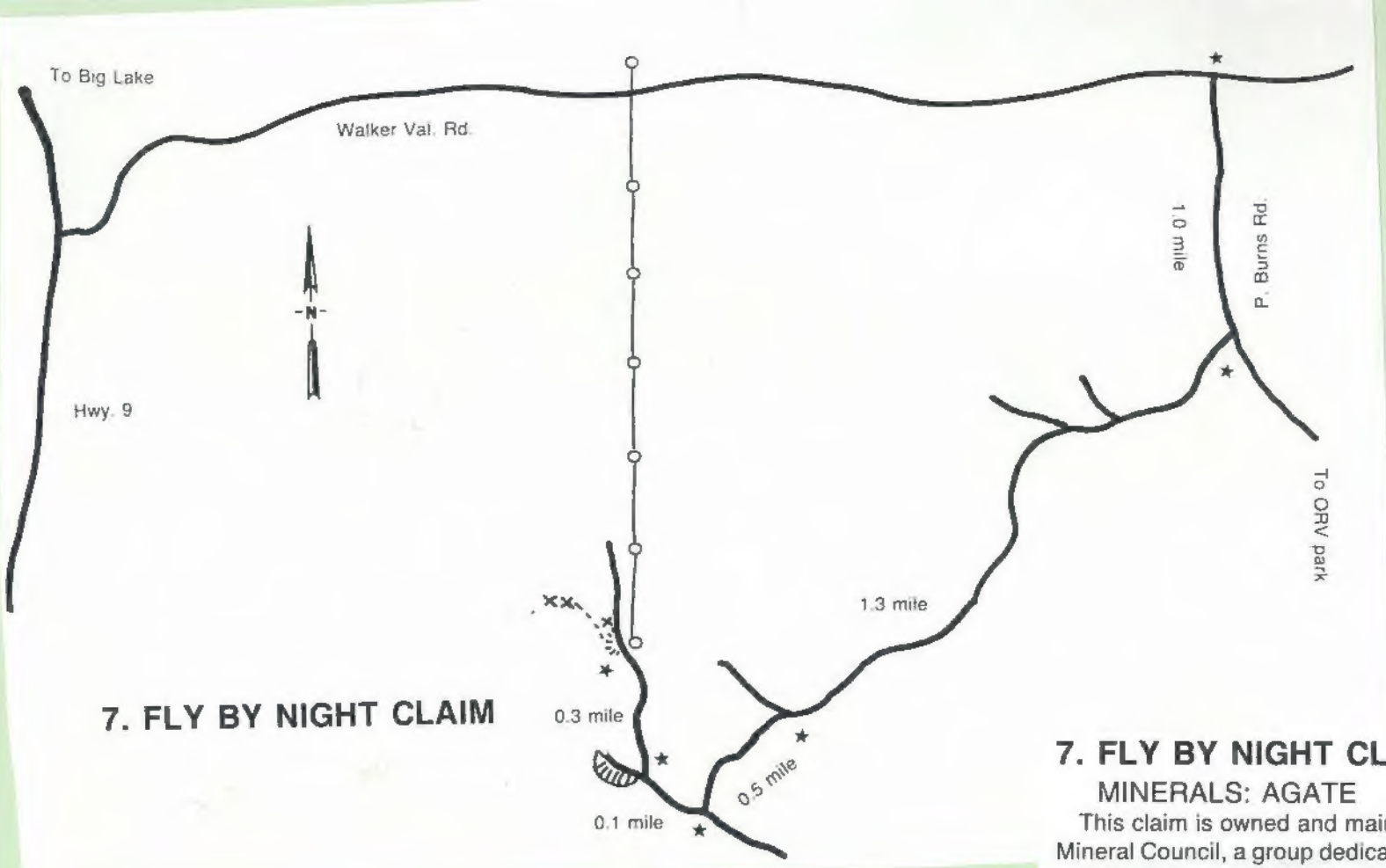


6. BACON CREEK SOAPSTONE

MINERALS: SOAPSTONE

The Marblemount area is famous for soapstone deposits. Some of the larger commercial mines ship material worldwide. Here are two localities where material is easily accessible, and of good quality, but the veins are too small for commercial exploitation. At the pit, you can chisel exposed cracks to obtain pieces under one pound. Notice the green stained quartz on the left side of the pit wall. Its a pretty ornamental stone, but doesn't polish.

Larger pieces of soapstone can be dug from the stream bed at locality "B". The stream was flowing when I was there in April, but may well dry up in summer. Bring a saw to collect pieces from the vertical vein at locality "C". There are more soapstone outcrops on the hillside behind locality "C".



7. FLY BY NIGHT CLAIM

7. FLY BY NIGHT CLAIM

MINERALS: AGATE

This claim is owned and maintained by the Washington State Mineral Council, a group dedicated to protecting collecting areas and promoting rockhounding in general. The original find was of carnelian and marcasite plumes in blue and white banded agate. This material is very attractive, and has been heavily dug at the pit just off the road. The vein continues at depth, but you're going to have to do some serious rock moving to find any. The Mineral Council does not permit power tools on its claims.

Recently, seams of blue agate were discovered on the ridge behind the original pit. The blue color is strong, and greatly resembles Ellensburg blue. The seams are up to 2 inches thick, and occur all over the ridge. Some shallow pits are dug in the ridgetop. As we walked up the trail, my companion pushed over a rock on the hillside, the underside of which was solid blue agate. We collected 5 pounds of dark blue in 5 minutes, using only our hands. This hillside will produce lots of agate!

The locality is just west of the powerlines, which are two sets of metal supports and one set of wood poles. The parking area is very close to the first metal support.

8. TOWER HILL

MINERALS: AGATE, JASPER

If you approach Monroe from the West, look southeast for a microwave tower in a large clearcut. Thats where you're going.

Materials to be found on this hilltop are varied. The best is carnelian fortifications in blue-grey agate. There is also white plume and white tubes in grey agate seams, brown jasper with white, red, and black polka dots, and varigated pastel jaspers. The whole hilltop is shot through with chalcedony; the areas marked on the map are where the rock has been exposed by roadbuilding or quarrying. At the area marked "B", we found significant amounts of agate in the soil. We did some minor trenching to expose a 3 inch seam in rock. Further digging in this area is definitely warranted.

The two gates shown belong to the folks who run the tower. They lock the lower one at 4:30 pm on weekdays. Don't get locked in!

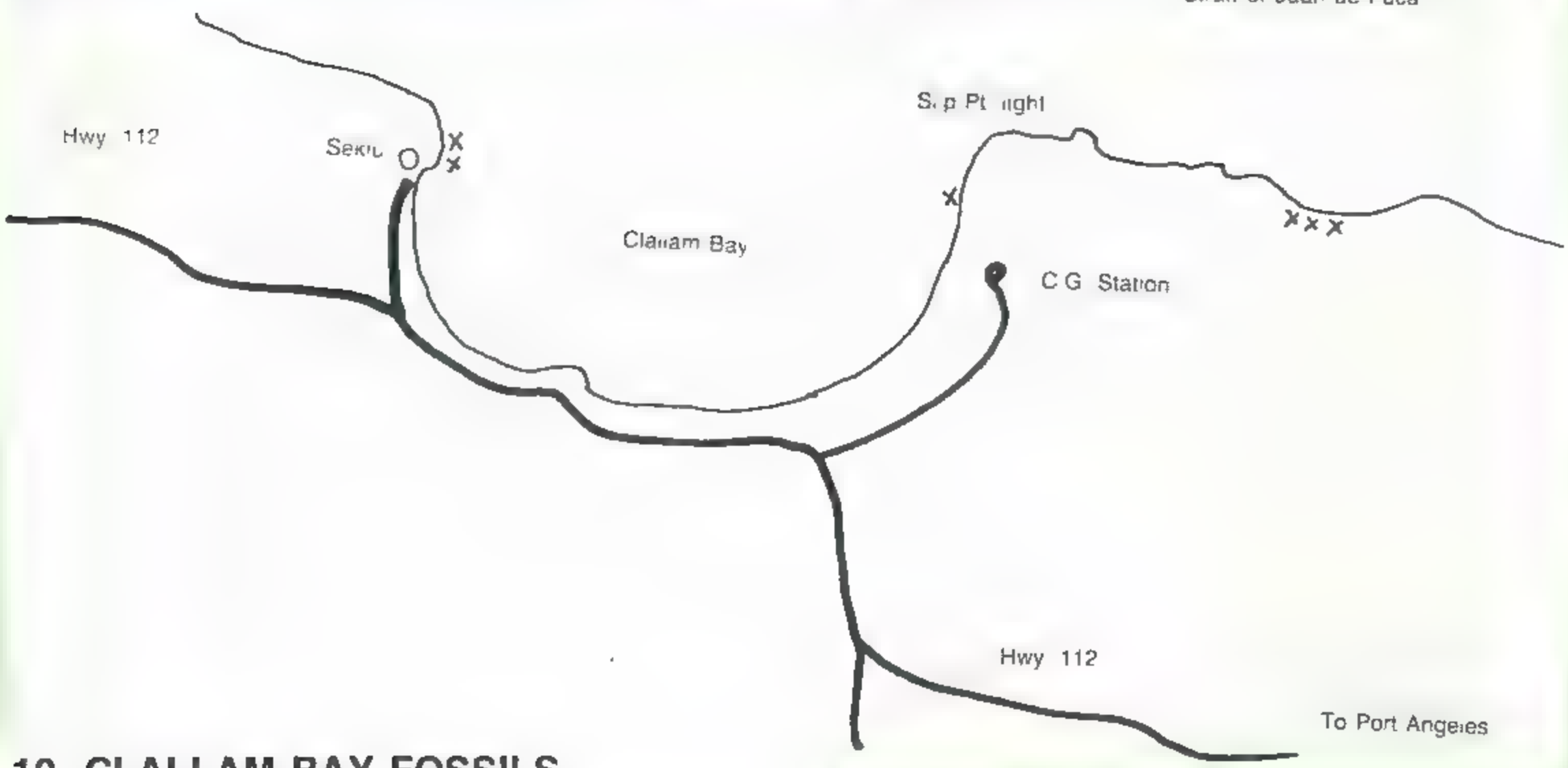
9. EARLY WINTERS CREEK AREA

MINERALS: SMOKY QUARTZ, ALBITE, ARFVEDSONITE, Gagarinite, Okanoginite, Zektzerite, as crystals

The Golden Horn batholith has become famous for a suite of rare minerals present in high alkali granites. Two of these, okanoganite and zektzerite, are not known to occur elsewhere. These granites have a good quantity of crystal-lined cavities known as miarolytic cavities. The most abundant crystals are smoky quartz, which commonly are a couple inches in length, but have been found up to a couple feet long. The smokies are medium brown in color, and often gemmy.

Thats the good news. The bad is that flocks of collectors seeking the rare minerals have combed all the areas near the road. To find good specimens, you're going to have to hike off the beaten path. I have had sucess on the ridges surrounding Cutthroat Lake, and the slopes on the south and east sides of Early Winters Creek. All these areas require significant hiking. The alkali granite occurs only at the higher elevations, so you either need to climb up there, or hunt in the boulder fields derived from up there. The area north and east of Cutthroat Lake is relatively unexplored.

10. CLALLAM BAY



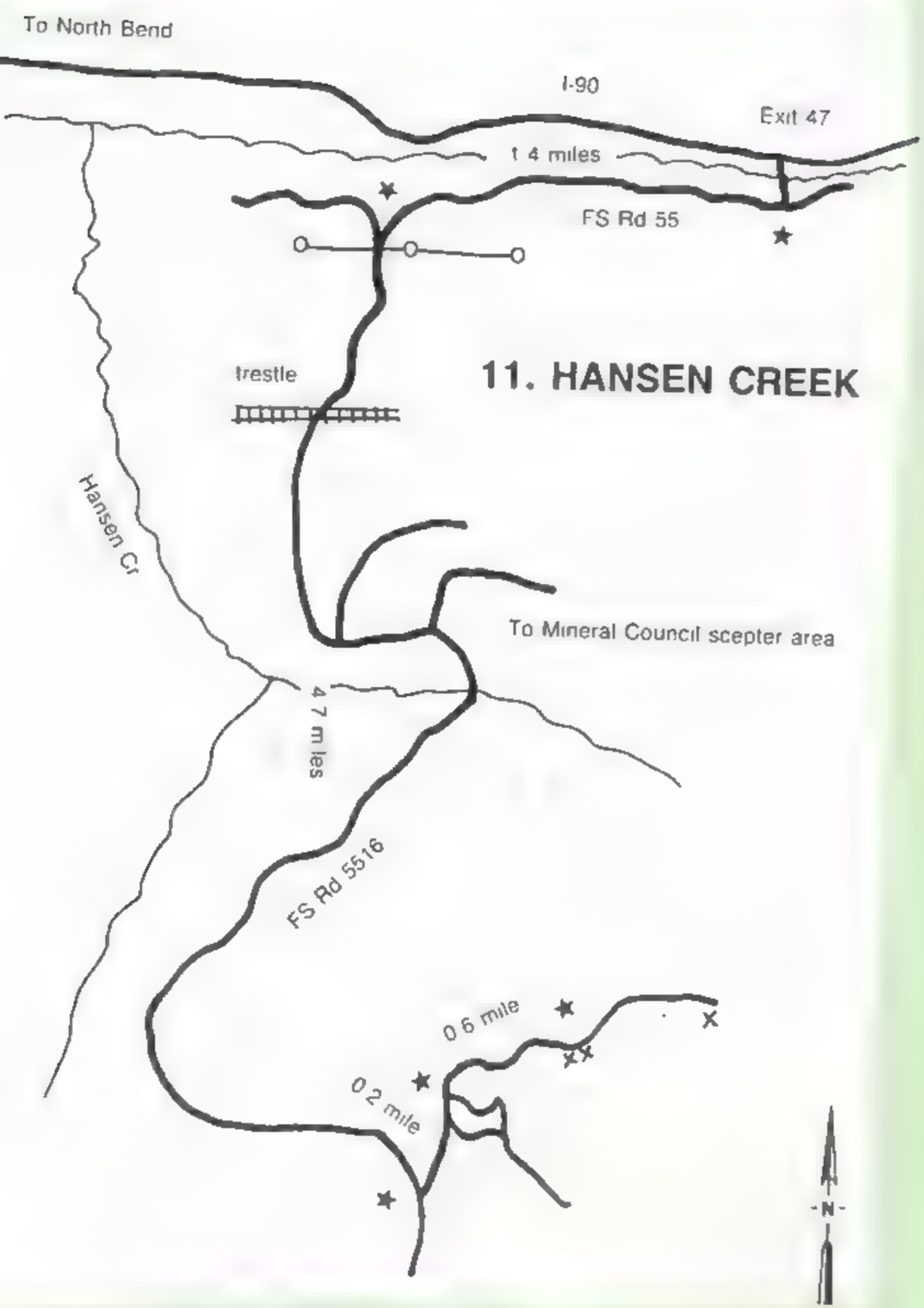
10. CLALLAM BAY FOSSILS

FOSSILS: SCALLOPS, SNAILS, CLAMS,
KELP TUBES, Vertebrates
MINERALS: AGATE, QUARTZ, CALCITE

There are three good fossil localities on or near Clallam Bay. Large (4 inch) fossilized scallops can be collected on the beach just north of the Coast Guard Station strobe light. Small fossil clams and snails are abundant on the bay beaches of Sekiu. Fossil-bearing concretions occur in the third cove west of the Slip Point light.

The concretions contain an interesting assemblage of fossils and minerals. A large fossil snail, Galodea, makes up about 30% of the fossils in concretions. Galodeas up to 6 inches have been found. Fossil kelp tubes found in concretions are often hollow, producing a geode-like concretion lined with agate and drusy quartz crystals. Concretions occasionally contain vertebrate fossils, particularly sea lion skulls, vertebra, and teeth.

All three localities require hiking along the beach While a beach hike is very pleasant in the summer, winter storms expose fresh material in the sea cliffs, generally making winter trips more productive. When hunting the cliff areas, be aware of tide timing High tide will cut off the access route, leaving you stranded or swimming.



11. HANSEN CREEK

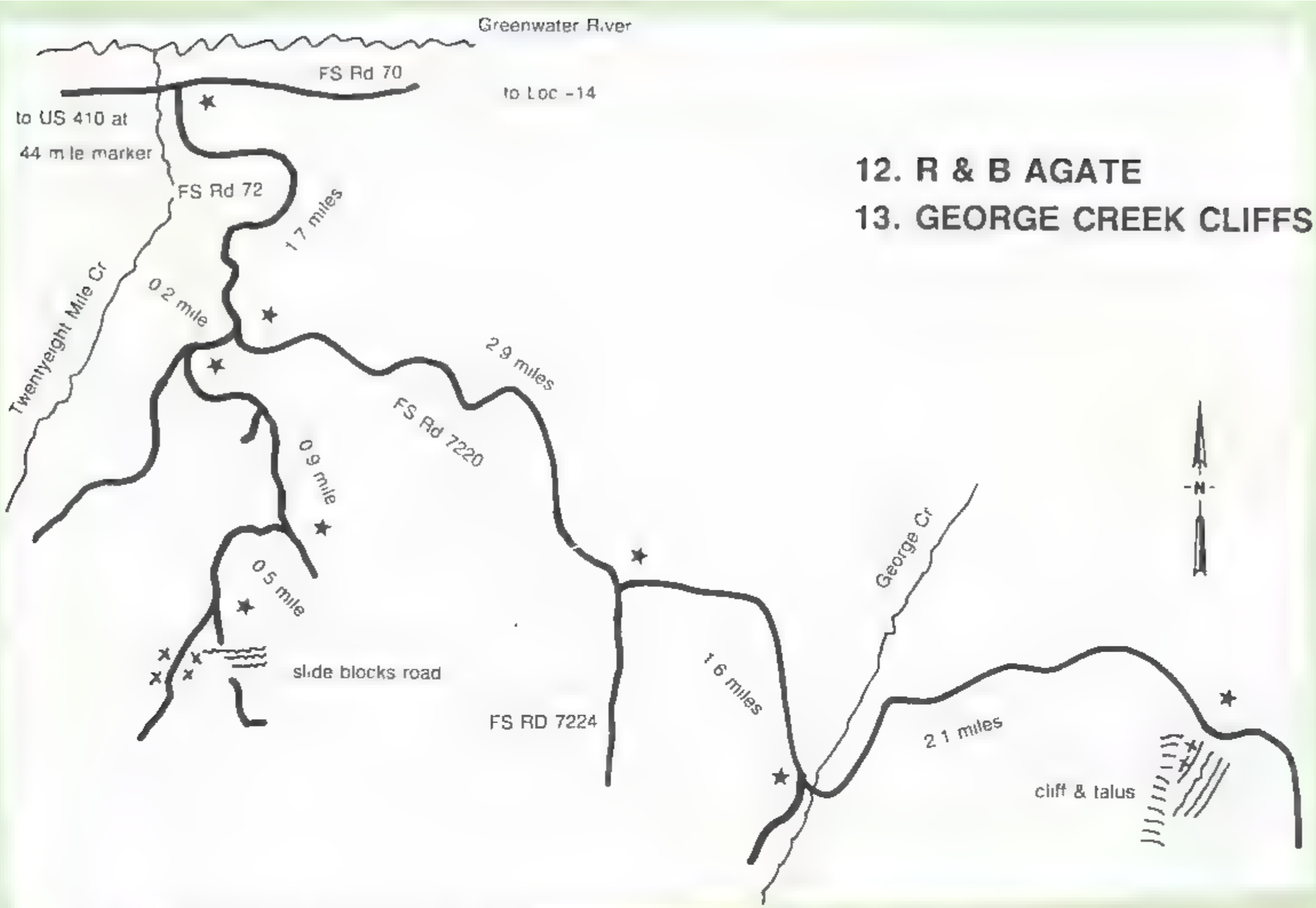
MINERALS: QUARTZ, SIDERITE, CHALCOPYRITE, as crystals; MANGANITE, CHLORITE, as inclusions in quartz crystals.

I think every crystal collector in the Northwest has been to Hansen Creek to search for amethyst scepters. In the 12 years since I first published the locality, the scepter area has gone from having a few piles of screened dirt along the roadside to hundreds of major excavations, some large enough to park a Volkswagen underground! Yet it seems most everyone has stayed within the boundaries of the traditional areas, now administered by the Mineral Council. Less than a mile from that locality are two others which produce strikingly different quartz crystals, including Japan Law twins.

To reach the areas, continue along the Hansen Creek road past the Mineral Council diggings. The road curves to the right and you cross a creek. Stop here and look due south. There are 3 roads above you. The cuts on the one just below the ridge is where you are going. Unless you're in a 4 X 4, you probably won't be able to drive all the way to the cuts.

The first series of cuts has produced fine clear quartz with chlorite phantoms and included manganite balls. The rock high in the cut moves easily, but most of the crystals are frost damaged or shattered Lower in the cut you can see the horizontal contact of 2 different rock structures. This is the area which has produced the best crystals. Yes, it's covered with rubble, but if the crystals were easy to get, we wouldn't value them so highly, right?

The cuts at the end of the road expose a mineralized shear zone. Chisel out calcite-filled areas, take them home and etch the calcite away with acid. If you haven't used acids before, please read about their use first. The procedure is simple, but can be deadly if you do it wrong. A good reference book is CLEANING AND PRESERVING MINERALS, by Richard Pearl.



12. R & B AGATE
13. GEORGE CREEK CLIFFS

12. ENUMCLAW RED & BLACK AGATE

MINERALS: AGATE, JASPER, PETRIFIED WOOD.

Here's an easy access locality with an abundance of half-pound chucks of cutting material. The red and black agate is locally famous and very pretty, but definitely not abundant. There is an abundance of common opal in pastel colors, jasper, and white plume vein agate. On my first trip I found several pieces of wavy-grained tan petrified wood, on my second trip, none.

Park at the intersection of the two roads. Bring a screen and shovel and work in the bank 20 feet above the lower road. You can also search the flat areas below the road for pieces of float.

13. GEORGE CREEK CLIFFS

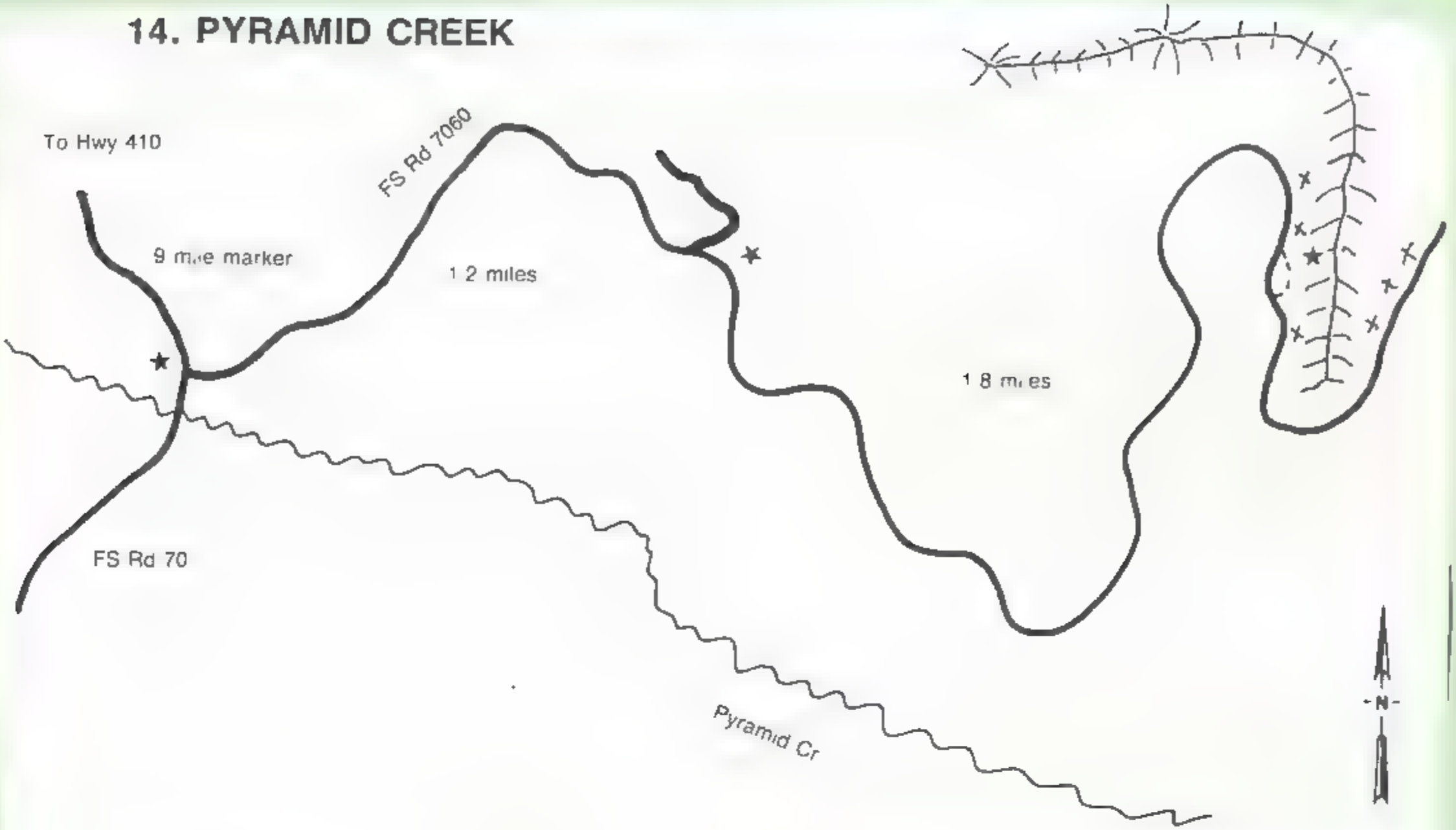
MINERALS: JASPER

There are 10 tons of pretty jasper within 1/4 mile of the road at the George Creek Cliffs. Typical of jasper localities, there are also 100 tons of ugly jasper within 1/4 mile of the road. Just to keep things interesting, both are dispersed in 100 billion tons of rock in a giant slide.

The best material is in a slide area near the cliffs. Hike up the rocky draw (go in dry weather, as it's worth your life to clamber over mossy boulders when they're wet!), past the brush-covered talus to the "clean" talus. On the way back, it's easy (relatively) to hike along the cliff/talus contact. On the cliffs near the road you'll see several lava tubes and areas mineralized with 1/4 inch pink stilbite crystals.

The jasper occurs in various shades of red, purple, yellow and brown. It weathers to almost the same color as the surrounding rock, so until you get the hang of it, chip the corner off everything that even whispers "red" to you. The greatest concentration I found lies among huge boulders about halfway up the steep part of the slide. You can find jasper in the cliffs too, but you can't work it out. I did find one crystal-lined geode in the cliffs, but this isn't a geode locality.

ENUMCLAW RED & BLACK AGATE



14. PYRAMID CREEK

MINERALS: DRUSY QUARTZ

Here's a terrific spot to spend a sunny day. Not only is there a fantastic view from this ridgetop, but the ground literally sparkles with drusy quartz crystals. You can spot the drusy from 50 feet away in the sunshine, but I'm not sure you could see it if you were standing on it in a cloud.

The drusy comes in little pieces suitable for jewelry and in large pieces suitable for display rock. Don't use it in a fireplace though; quartz crystals have a bad habit of exploding when heated.

The drusy outcrops all over the ridge. Pieces are abundant in the rockslide you cross as the road turns the last switchback before the ridge. There is a good exposure of drusy in an outcrop about one-third of the way to the cliffs from the wide spot in the road. In true geologist fashion, I climbed to the cliffs, to see where it was all coming from. Yep, it's coming from the cliffs, but you can't get at it there. I did find a few 1 inch quartz crystals at the base of the cliffs, but did not ascertain from whence they fell. The drusy deposit goes through the ridge, so you can continue around the end and collect on the other side too

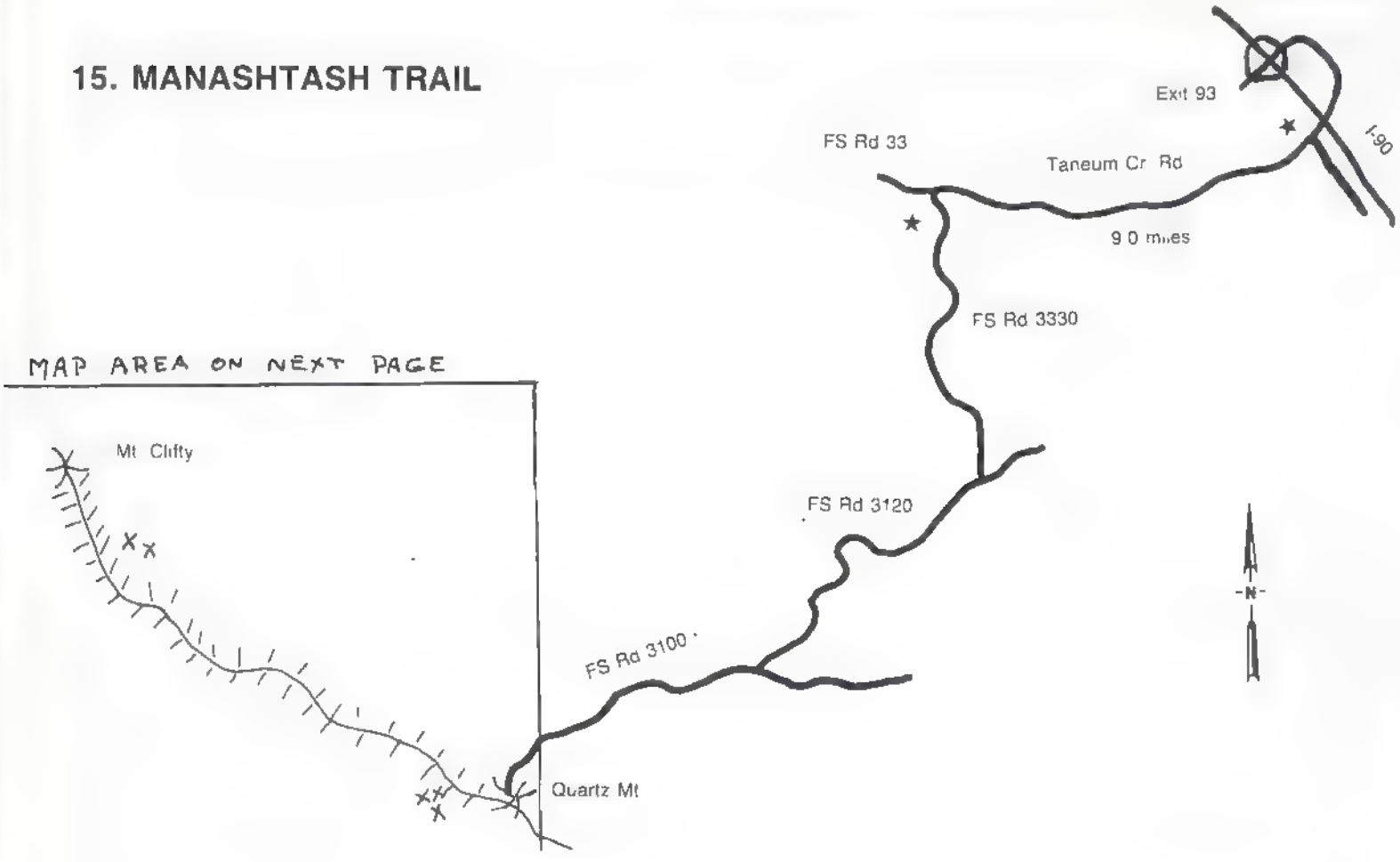
15. MANASHTASH RIDGE TRAIL

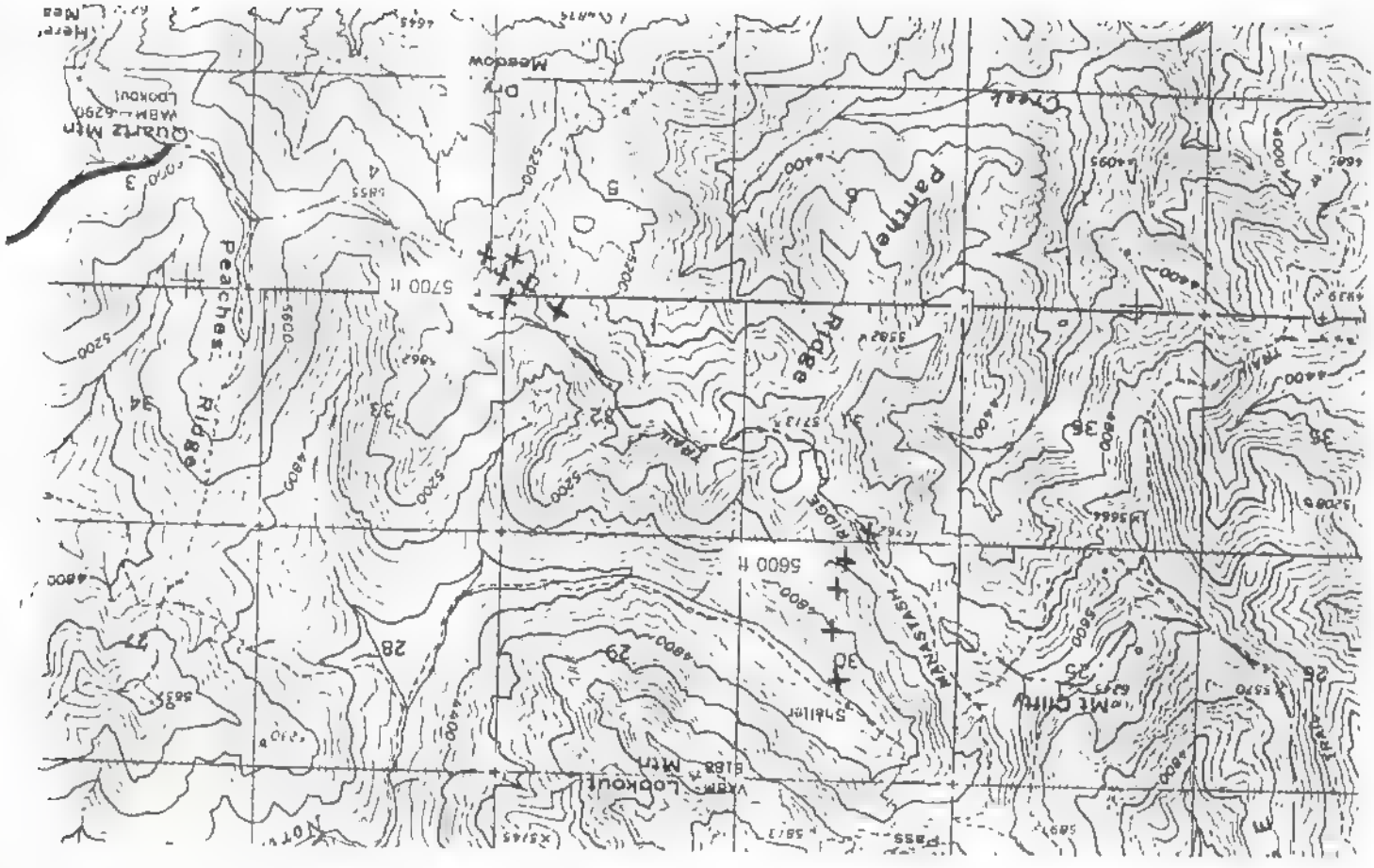
MINERALS: QUARTZ, ZEOLITES, as crystals; AGATE, JASPER, CALCITE

This is the only locality I've ever published which I haven't personally been to. It's a virtually unknown area, with abundant material, and still under snow as this book is going to press. I've seen the geodes, and they are nice. The directions are from a geologist's masters thesis, and the map is USGS, so I'm confident you will find it.

The area is a mix of volcanic rocks, some of which have lots of vesicles filled with the minerals of interest. The geologist wrote "abundant amygdules (holes) to 8 inches across filled with calcite, chalcedony, zeolites, and coarse quartz crystals. Thick veins up to 6 inches wide of red jasper and blue-green chalcedony are also common." Access is by trail only, so the pickings should be good for quite awhile.

15. MANASHTASH TRAIL





16. TIMBERWOLF PEAK

MINERALS: QUARTZ, as crystals

There are a lot of Northwest mineral collectors who specialize in quartz, partly because quartz crystals abound here. And after collecting a good number of beautiful quartz groups, collectors often seek out the less common habits of the mineral: scepters, twins, inclusions, enhydros. There exist a seemingly infinite variety of peculiar forms of quartz. "Wierd" quartz is not for everyone, but if it's your cup of tea, head for Timberwolf Peak.

The quartz here is highly skeletalized. The angled edges between the sides of quartz crystals sometimes grow faster than the sides themselves, resulting in triangular depressions on the terminations. A crystal with such depressions is termed skeletalized. Frequently the edges of such a depression will later bridge new material across the top of the depression, sealing a hollow chamber inside the crystal. When the depression is sealed while full of the liquid from which the quartz crystal was growing, we term this a fluid inclusion. Minute fluid inclusions are common in almost all minerals. Large ones are not. When a significant amount of gas (usually carbon dioxide) is dissolved in the fluid inclusion, a bubble will form upon cooling. The bubble floats inside the liquid-filled chamber in the crystal like the bubble in a carpenters level. Moveable bubbles are highly sought after in quartz crystals. Timberwolf Peak is a good place to seek them.

There are obvious trenches on the mountainside in which to dig. The crystals are in soft seams in the rock. Occasional crystals can be found in the slide. Most crystals are singles, but matrix groups do occur. Most of the crystals are skeletalized; about 5% have moveable bubbles. I have seen reverse scepters also.

17. McCOY CREEK

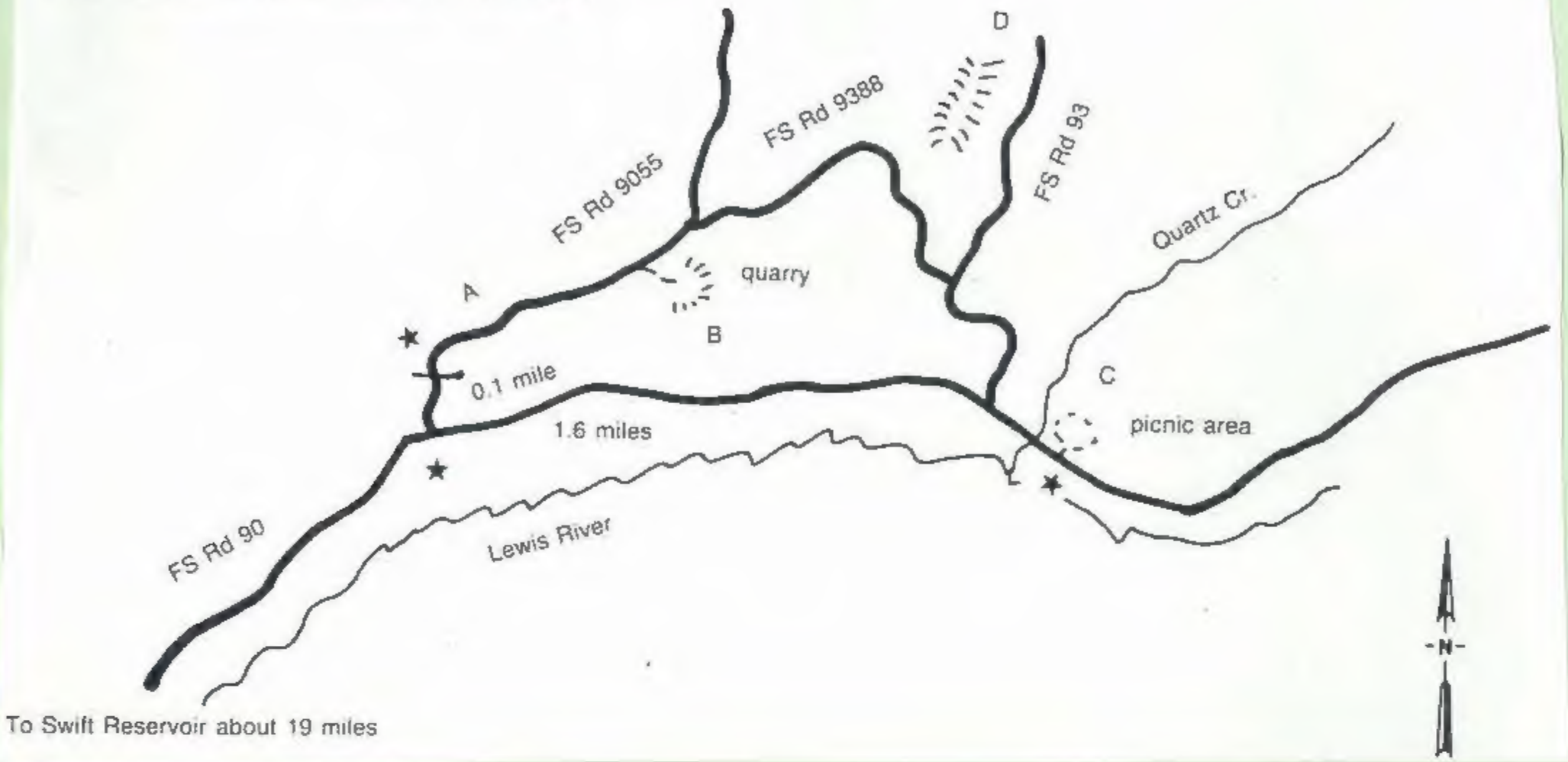
MINERALS: PYRITE, QUARTZ, as crystals

It took me 5 trips over 2 years time to find this locality after I had first heard of it — if you don't know exactly where to go, it's a tough place to find. Fortunately, YOU have directions! The hike down into the creek canyon is steep, and the creek flows through an incredible maze of blown-down trees

Now that you're wondering why you would ever want to collect at such a place, let me tell you about the pyrite· it's beautiful! It's the only other locality in the state that produces large pyrites as lustrous as the specimens we have mined from the Spruce claim If you are unfamiliar with Spruce claim pyrite see "Useful Addresses" at the end of the book.

The McCoy pyrites are found in an altered tuff — a spongy volcanic rock. Many of the crystals are protected in clay seams. Dig material out of the bank, splitting seams as you encounter them. Two good matrix pieces with 1/2 to 1 inch pyrites is a decent find for a day at McCoy. The larger pyrites often have multiple growth hillocks — interesting designs on top.

If you are a real glutton for punishment, or need to train for the pentathlon, you may want to walk (climb, burrow, wriggle) downstream for about a mile to an outcrop with small Japan Law twin quartz. It is on the opposite side of the creek from the pyrite, and in the first outcrop you come upon going downstream The twins are mostly under 1/4 inch.



18. QUARTZ CREEK RIDGE

MINERALS: AGATE, JASPER, DRUSY QUARTZ

Very attractive lapidary materials occur all over this area. The local lava flows are largely porous, usually red or brown in color, and contain lots of goodies. Locality "A" is a roadcut which was apparently never visited by a collector before I arrived, as there were 10 pound chunks of pretty jasp-agate lying all over. As always, this surface material will vanish quickly, but there are seams to 4 inches thick and segregations larger than that in the roadcut. The rock breaks easily, so a hammer, chisel, and small bar should produce lots. The jasper varies from white to red, including many pretty pink shades. Some is banded like Ohio flint, some polka-dot, some has drusy quartz pockets, and some fortification agate areas. All that I've tried cuts well.

The jasper-bearing area continues up the road for at least 200 yards. The small creek above the road has jasper float in it, so there must be more above. Jasper also shows up in the soil of the logged off area between locality "A" and route 90.

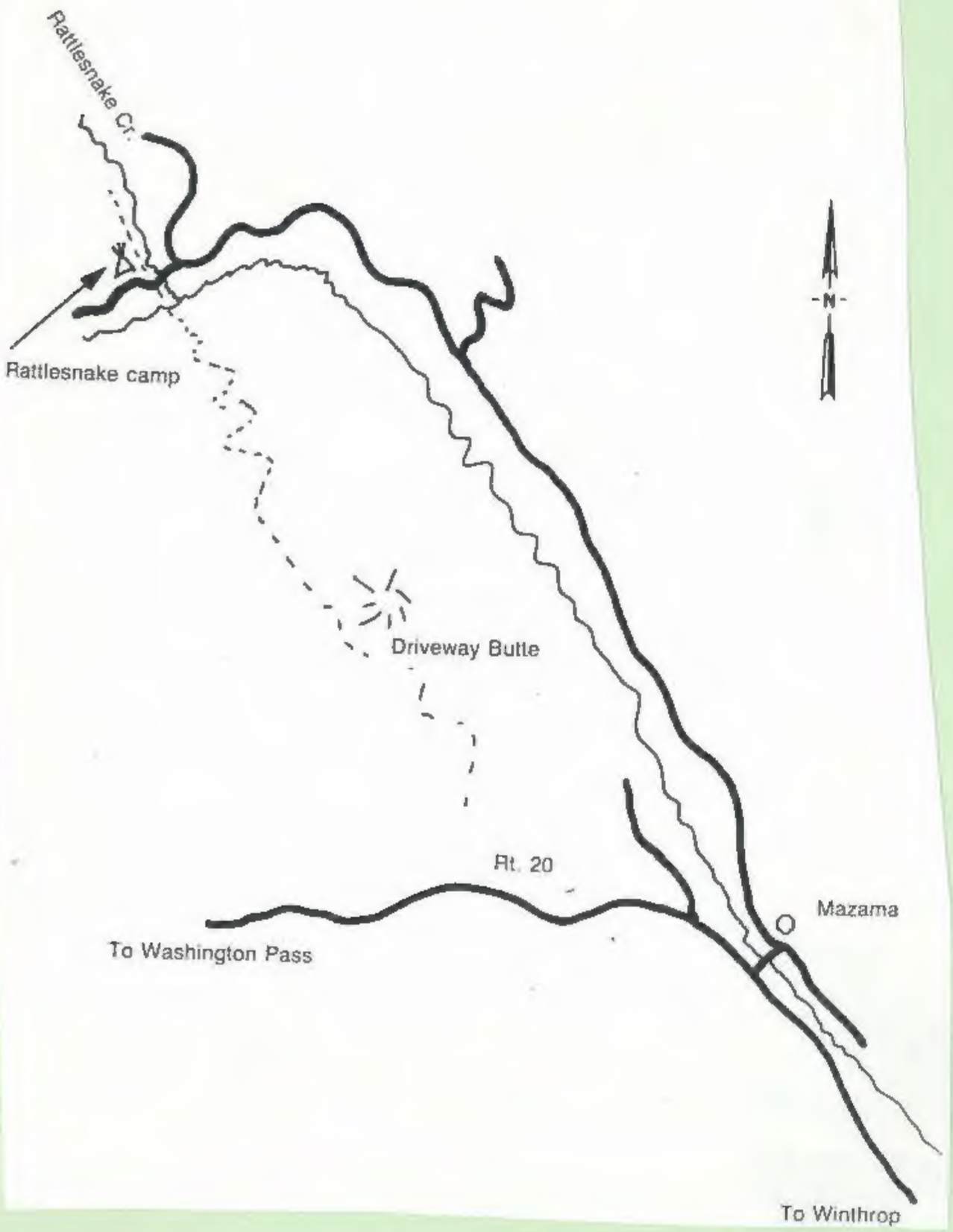
There is a road rock quarry less than a mile further up 9055. I found many seams of blue/white agate, some plume, and quartz crystal-lined geodes to 6 inches. These were in the rubble piles left by recent work. I expect the quarry gets very picked over when it hasn't been worked for awhile.

Locality "C" is Quartz Creek, which should have been named Agate Creek. Most of the old prospectors who named creeks and mountains didn't know that agate is a form of quartz. Massive quartz seams often carry gold, so only massive quartz was referred to as "quartz." There is a little massive white quartz in the creek too, which is probably the source of the name. There is far more agate, though.

I was there at high water, and still picked a half dozen agates and jaspers out of the creek in a few minutes. If you go wading when the creek is low, you'll find lots of material.

Locality "D" is a ridge of porous rock similar to that at "A," except for the lack of jasper. There are lots of small nodules of white plume.

19. DRIVEWAY BUTTE



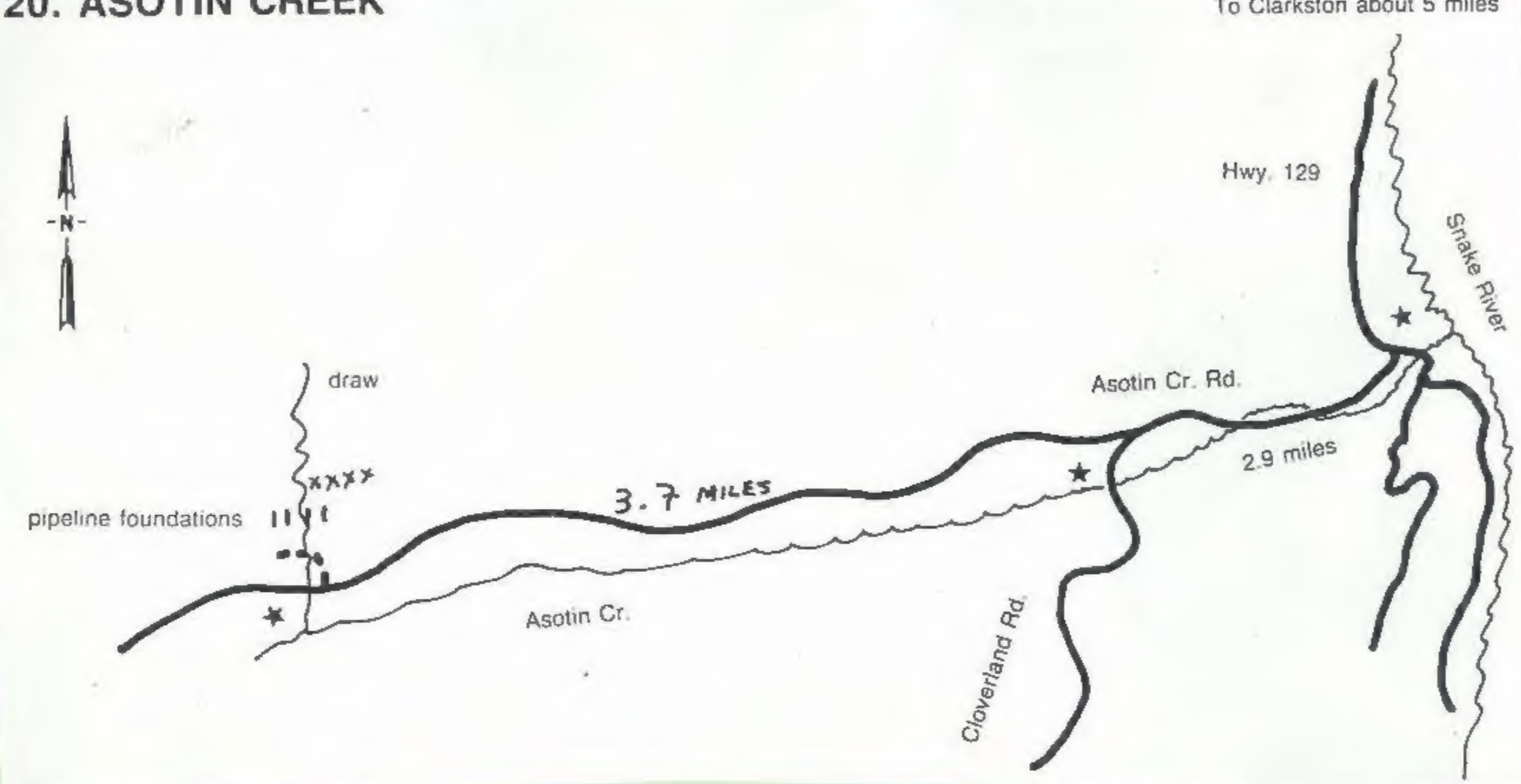
19. DRIVEWAY BUTTE

MINERALS: QUARTZ, as crystals.
LIMONITE, as pseudomorphs after pyrite

Driveway Butte is a hike you'll remember. The hike is neither steep nor difficult, but it is long. The crystals occur in veins with openings often exceeding 6 feet in length. I have seen milky Driveway Butte crystals with complex terminations about 4 inches in length, but have found few that exceeded 2 inches. The nature of the veins produce large matrix slabs of crystals, so be prepared to pack out some weight.

There are several good areas to collect. Look for quartz veins at the head of talus slides. You'll need heavy tools to work the cliff faces, but you can also pick material up in the slides. Watch your step when climbing around on the talus blocks, for everything is quite loose. A ride on a talus boulder is the quick way down the mountain, but dismounting is tricky.

20. ASOTIN CREEK



20. ASOTIN CREEK

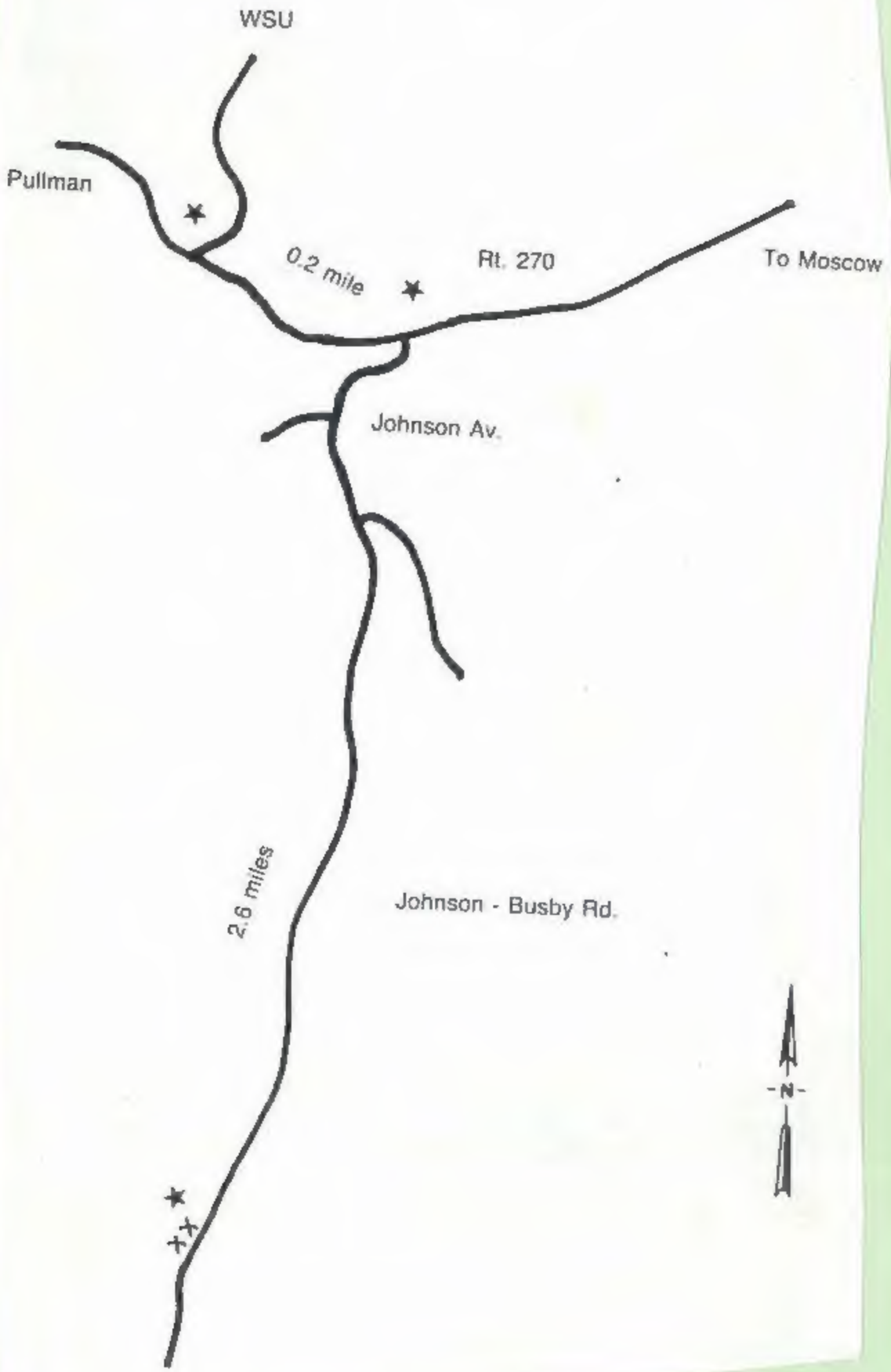
MINERALS: OPALIZED WOOD

The Asotin Creek petrified wood deposit produced tons of specimens in the 1950's, with logs up to 3 feet diameter. All the material came from one small draw. Being naturally curious, I sampled the matrix in the draw and walked off cross country to see if there was any more. There is, but it's not close to the road. This makes it difficult to haul out 3 foot rounds, but I was happy with a 4 inch limb about a foot long.

Stop at the historic locality to observe the matrix. It is silicified basalt and tuff, quite vesicular (many small holes), and weathers orange-brown. You can find small pieces of wood here, leftovers, but you'll do better to go exploring. Since the lava flows are roughly horizontal, you can take a pocket altimeter and check areas at roughly the same elevation. The material always occurs between two lava flows. The best wood I collected was on the other side of the valley. The vesicular basalt occasionally contains small agate nodules as well.

The whole area is grazing land, some private, some BLM. Fill any holes you dig, leave fences and gates in the position you found them, and you'll be welcome in the area.

21. BUSBY



21. BUSBY

MINERALS: SIDERITE, OPAL

Here's one for your "It's from Washington and I've got one" collection. I can't imagine collecting many of these, but the first few are interesting. The vesicles also contain over a dozen other microscopic minerals, perhaps of interest to micromounters. Micro franklinite and wilkeite are reported to occur here. The visible minerals are iridescent siderite spheres and hyalite opal spheres. Some of the hyalite is iridescent too, which may make it precious opal, but since the largest spheres are 3 millimeters, who cares?

The locality is a large roadcut just south of the grain terminal which used to be Busby. As long as you break FRESH gray basalt, it doesn't seem to matter where you work. Most of the quarries in the area produce the same stuff. The cut is just easy to access.

About half the vesicles contain siderite and opal. A fair amount also contain tiny brown spiders which bite! I didn't notice if the spiders preferred vesicles with or without siderite, but I did wear gloves and a long sleeved shirt. You should too.